

Figure 1

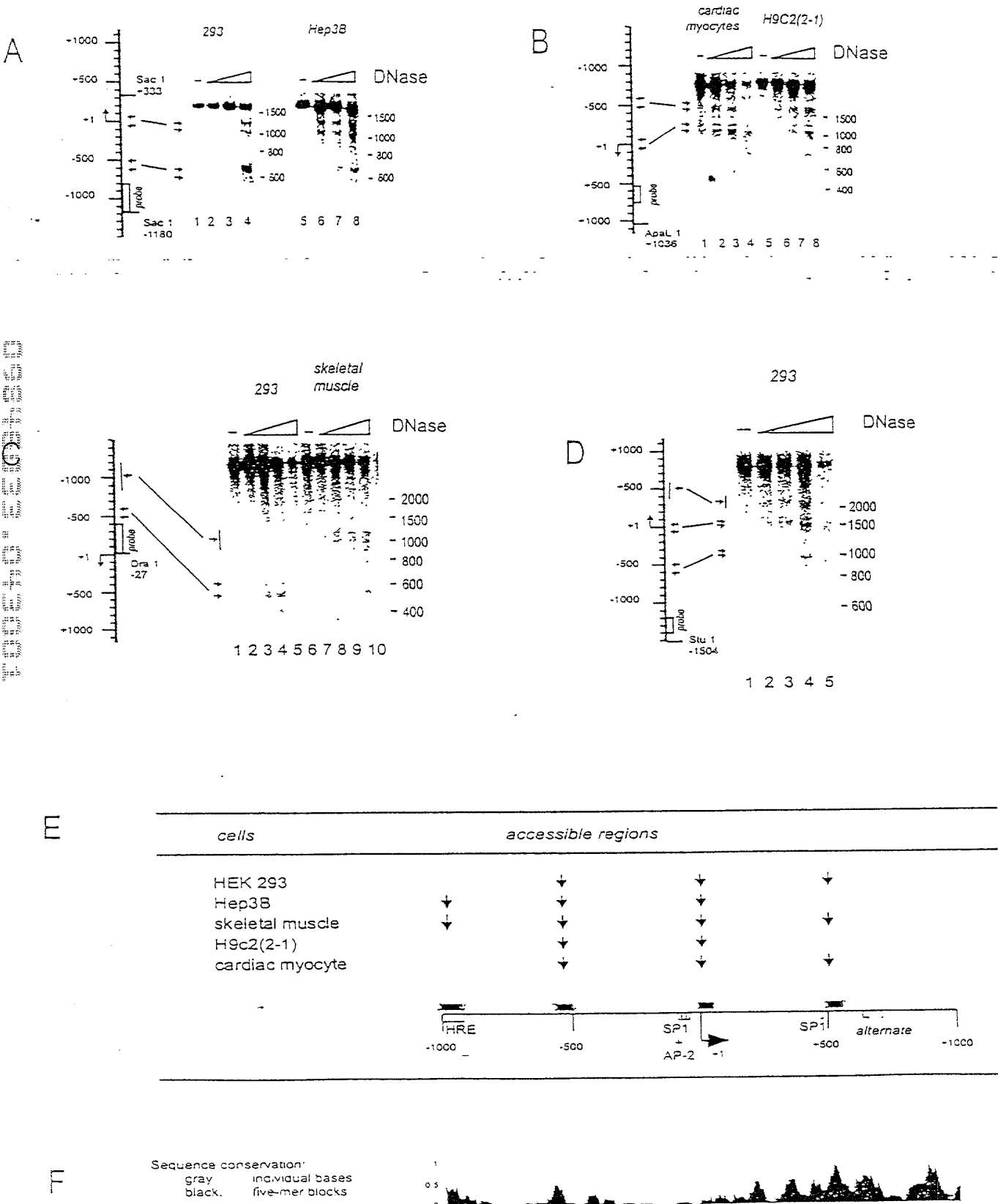
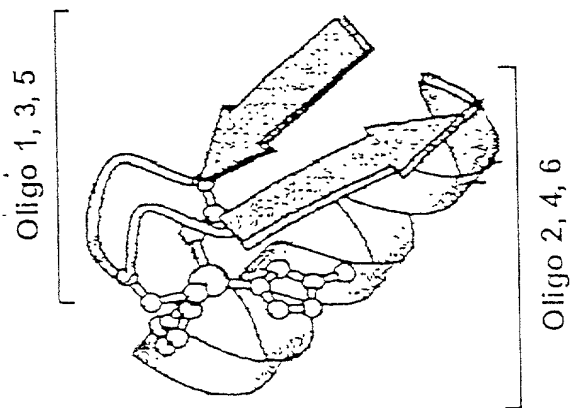
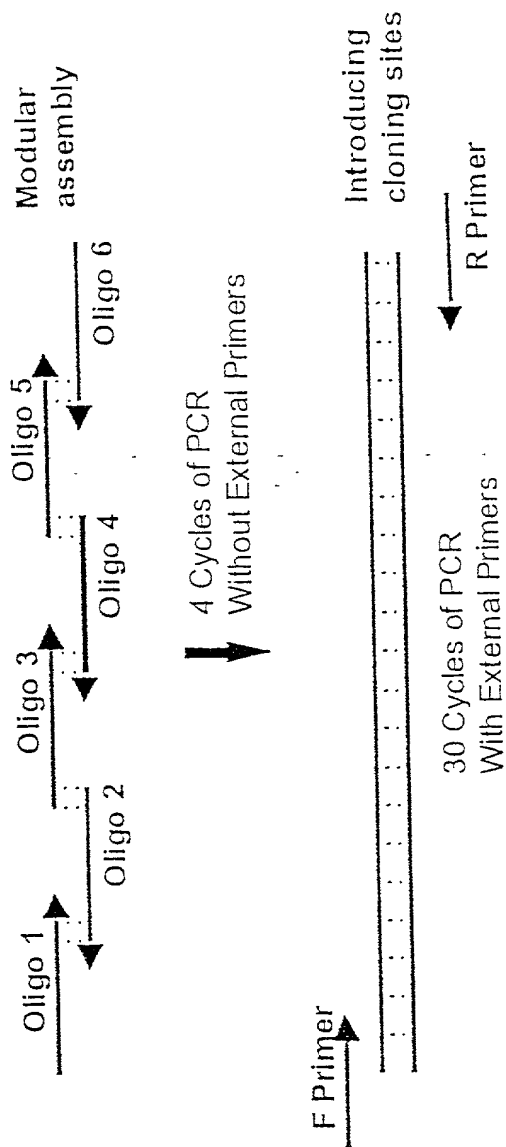


Figure 2

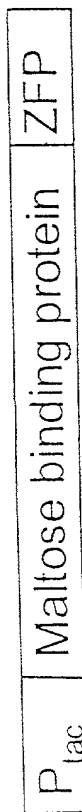
A



B



C



# Figure 2

D

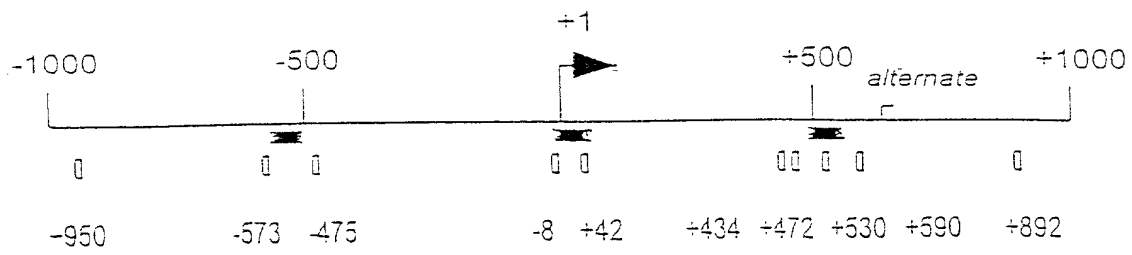
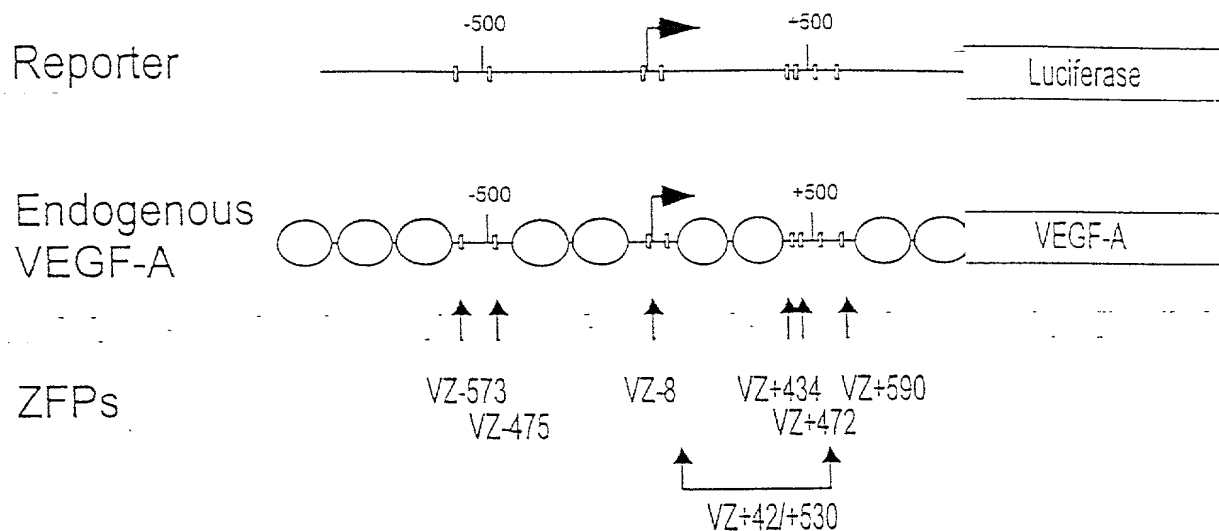


Figure 2 shows a genomic map of a DNA sequence. The map is oriented horizontally, with the sequence running from left to right. The top of the map is labeled with coordinates: -1000, -500, +1, +500, and +1000. A black arrow points right from the +1 position. Below the line, there are several boxes representing exons and lines representing introns. The boxes are labeled with coordinates: -950, -573, -475, -8, +42, +434, +472, +530, +590, and +892. The word "alternate" is written above the line between +500 and +1000.

Figure 3

A



B

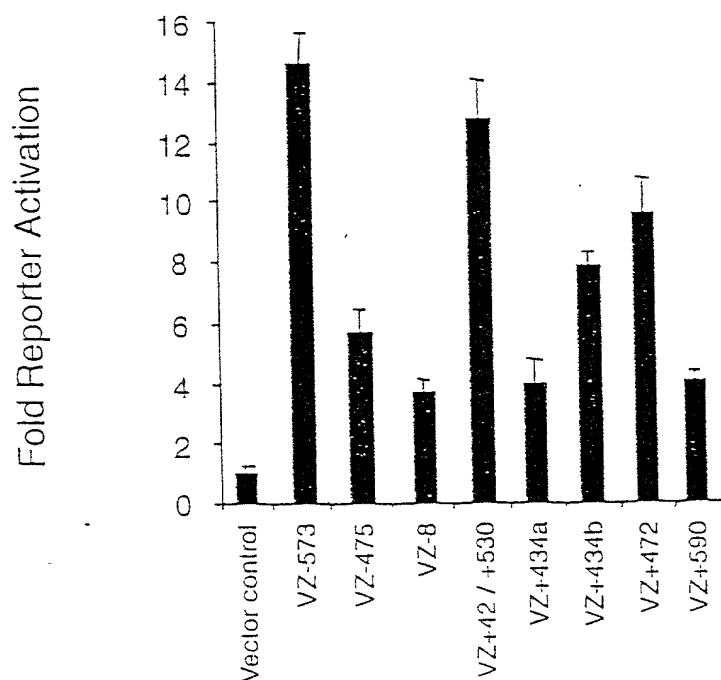
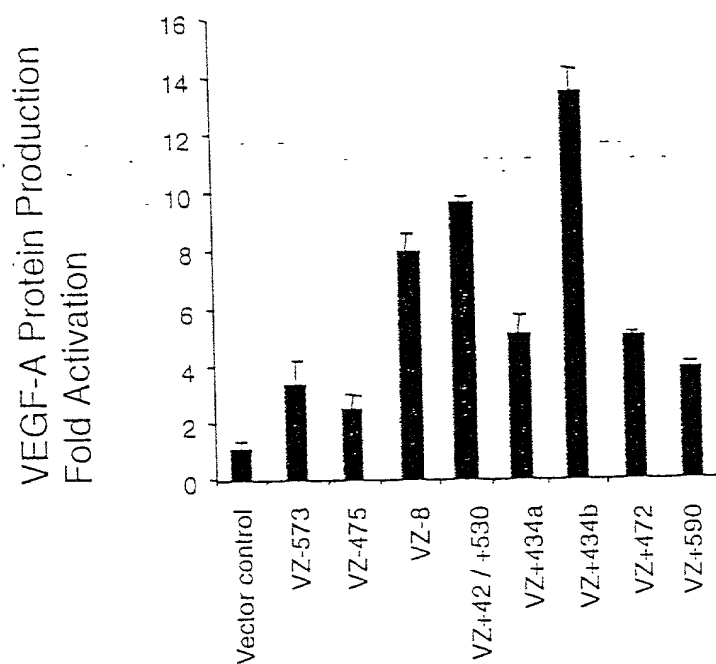


Figure 3

C



D

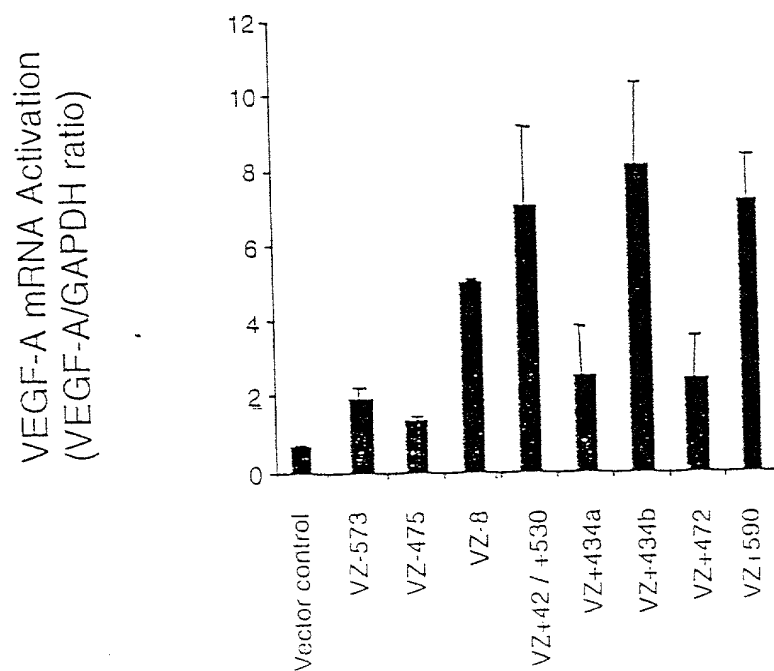
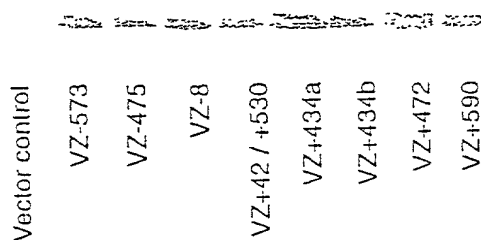


Figure 3

E

ZFP  
Protein



F

Relative ZFP mRNA levels  
(VP16 / GAPDH by Taqman)

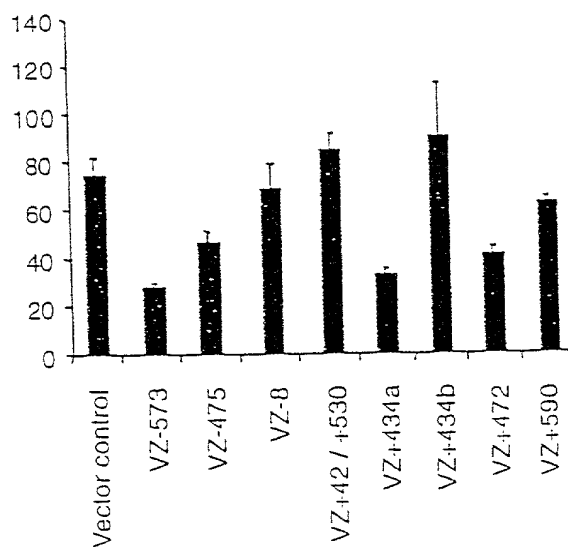
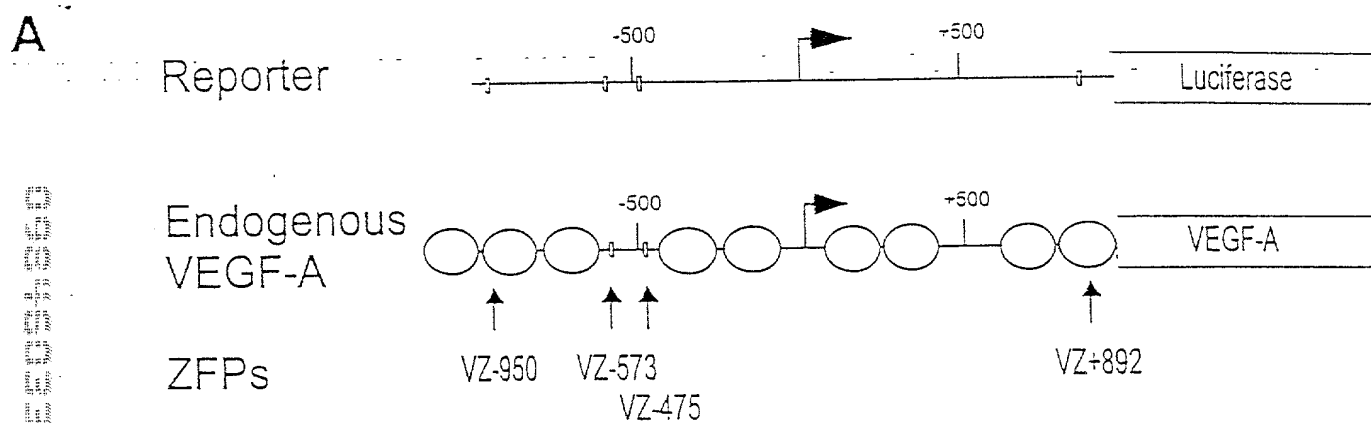
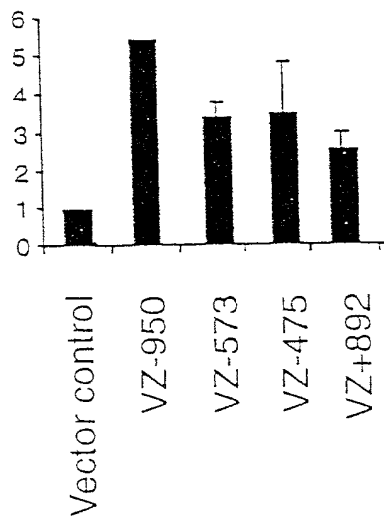


Figure 4



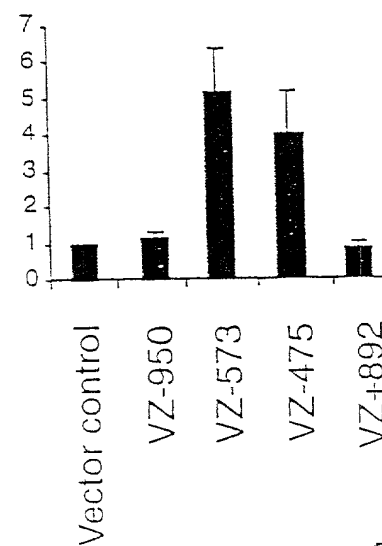
**B**

Fold Reporter Activation

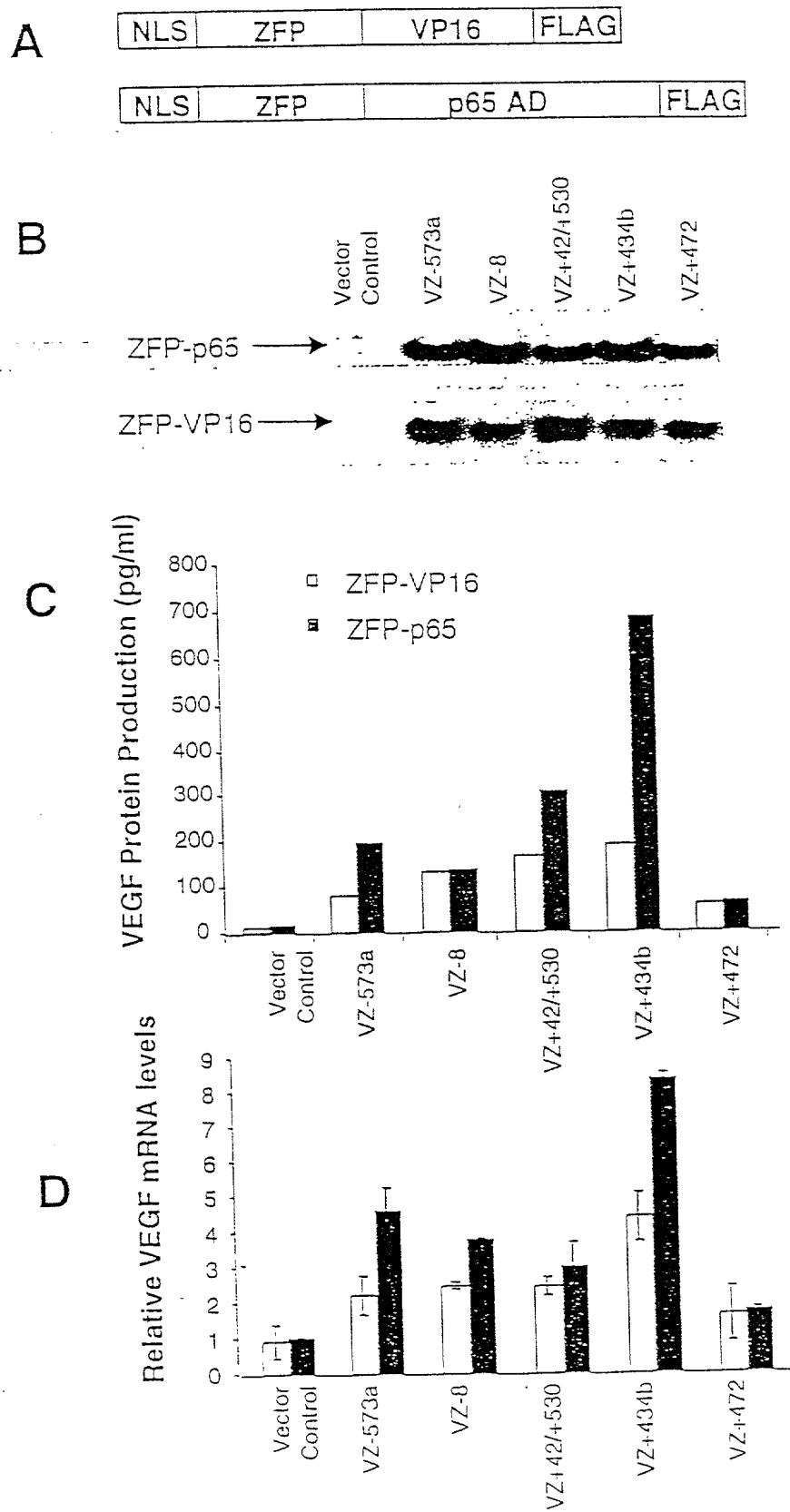


**C**

Endogenous VEGF-A protein fold activation



# Figure 5





# Figure 6

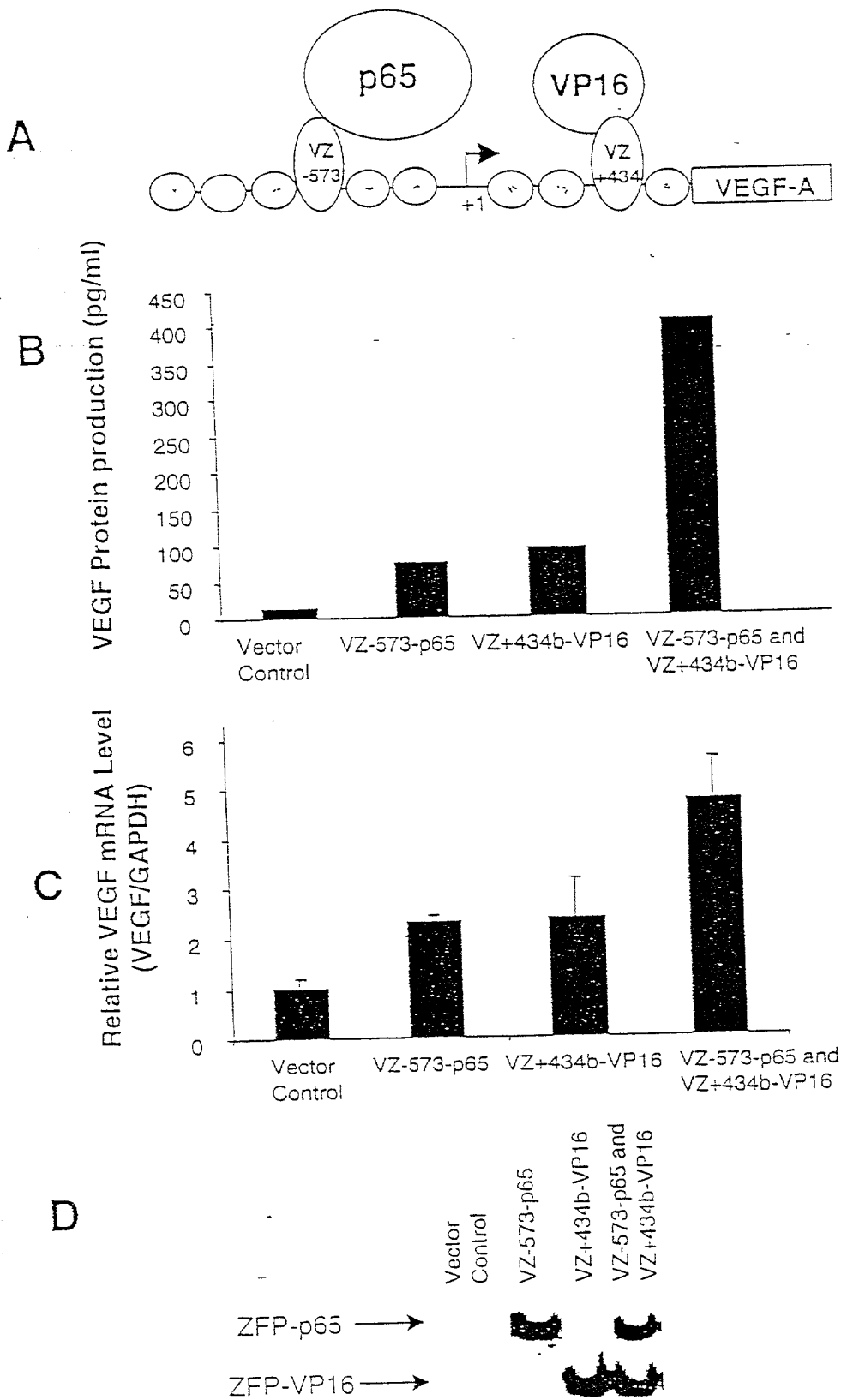
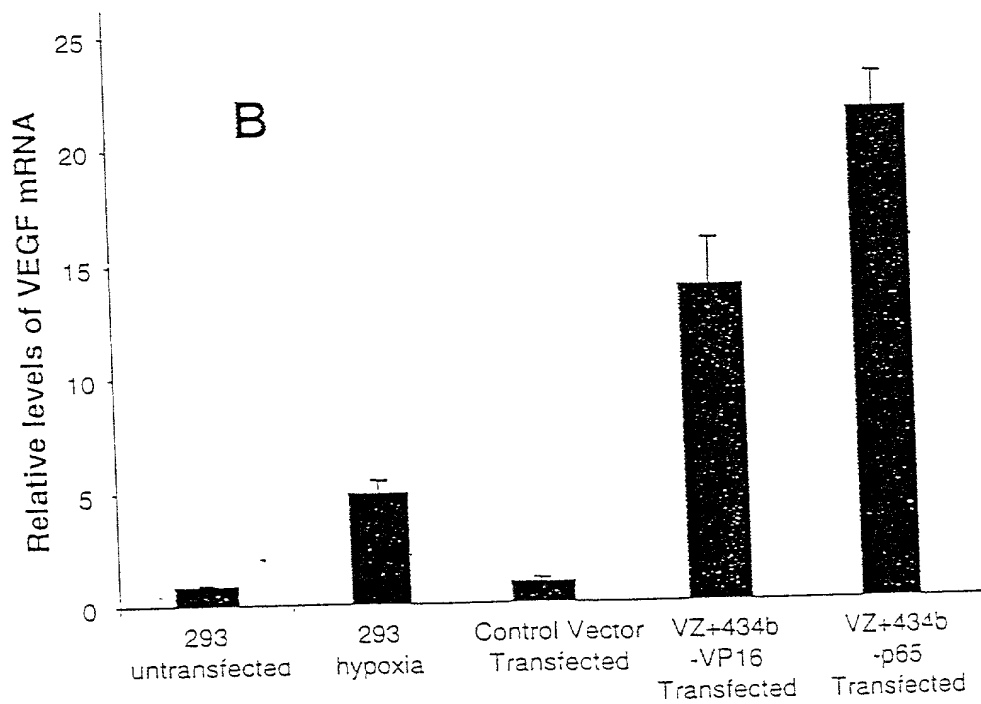
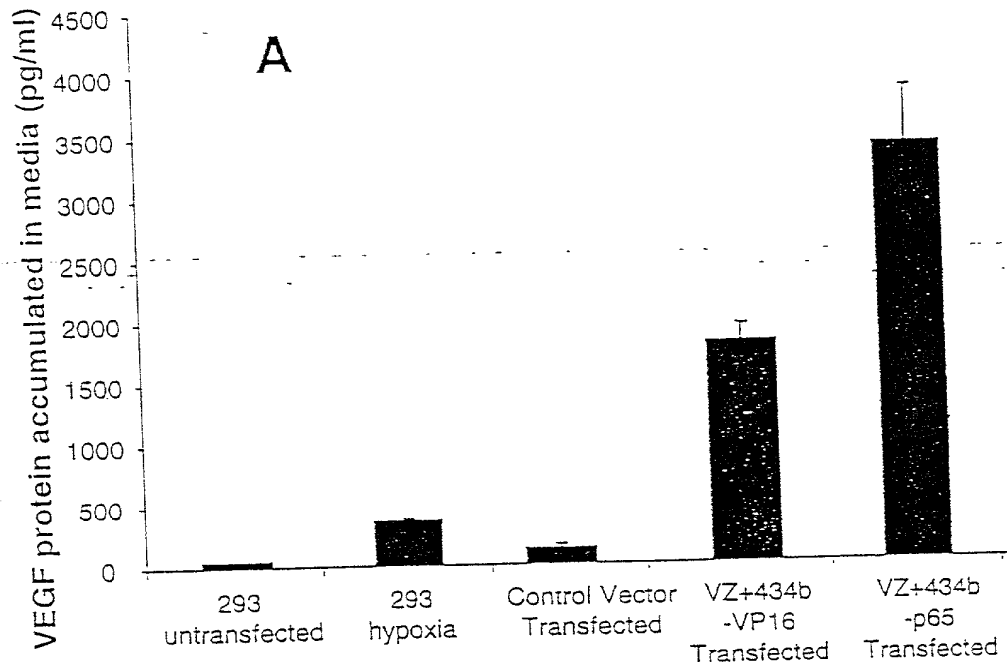
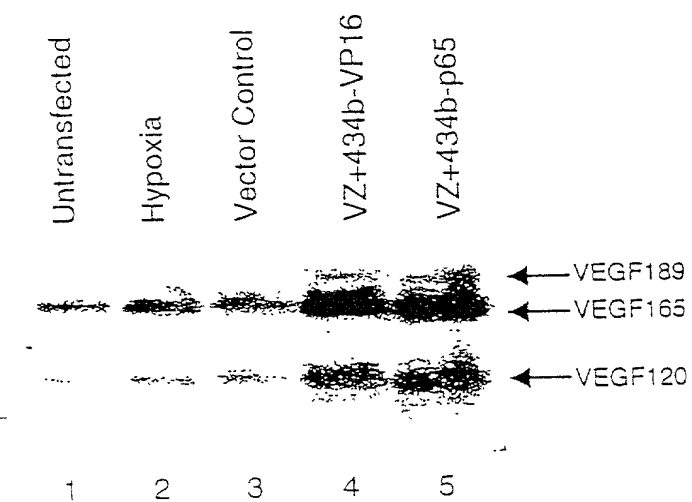


Figure 7



[illegible]

D



Control

Monomer



FIG. 8

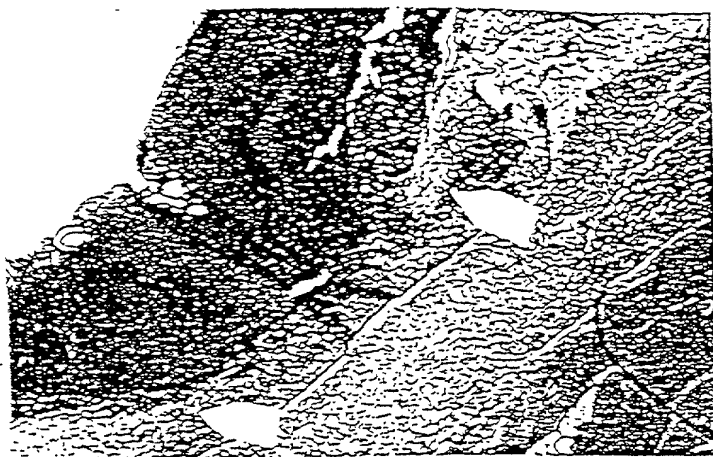
Control

A.



+ ZFP

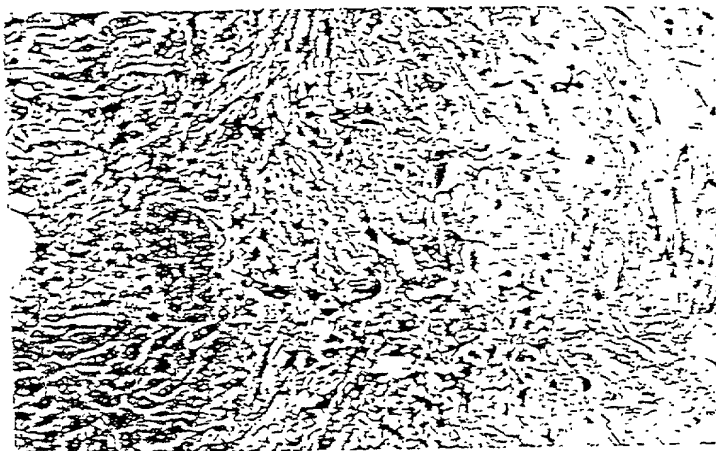
B.



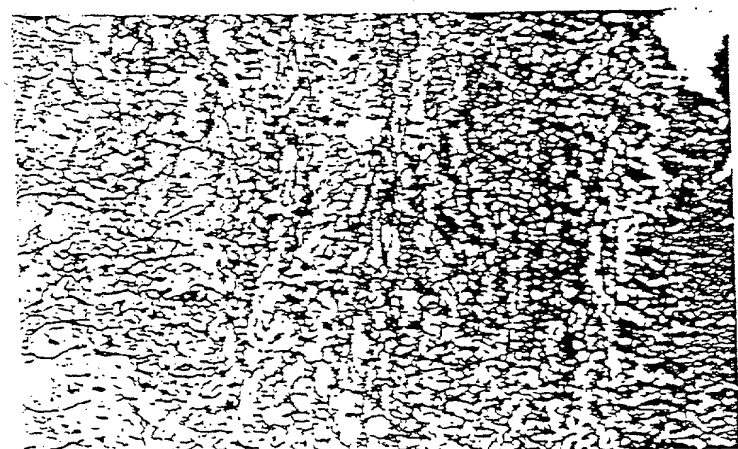
C.



D.



E.



F.

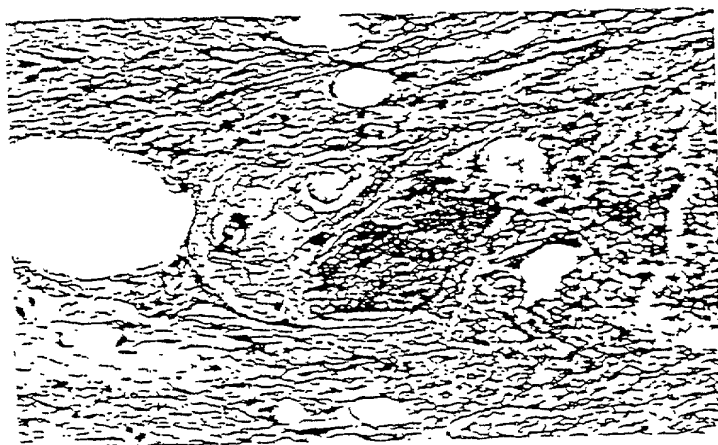


FIG. 9

# Activation of Human VEGF-A Gene By ZFPs in 293 Cells (VEGF-A protein production detected by ELISA)

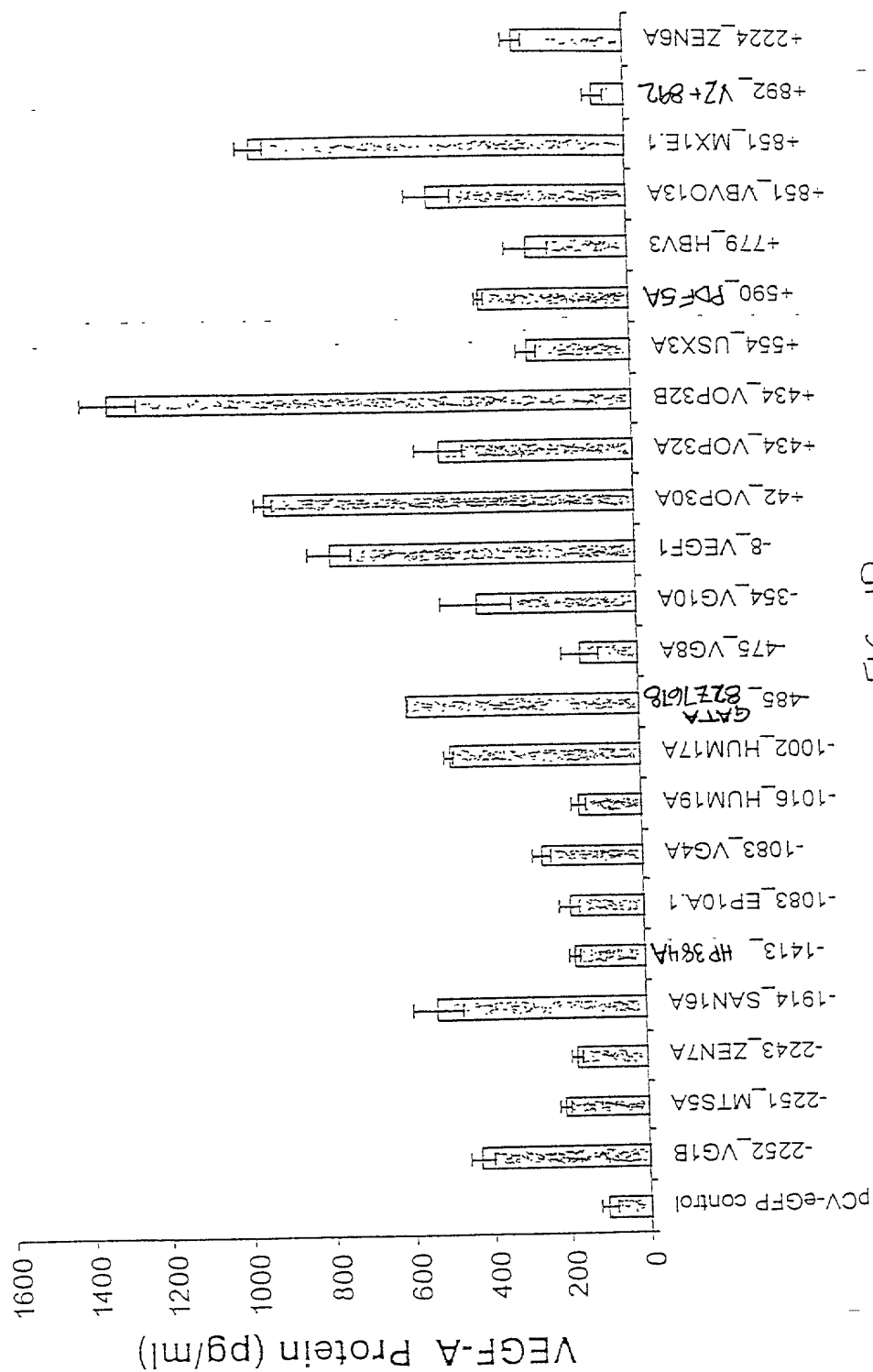
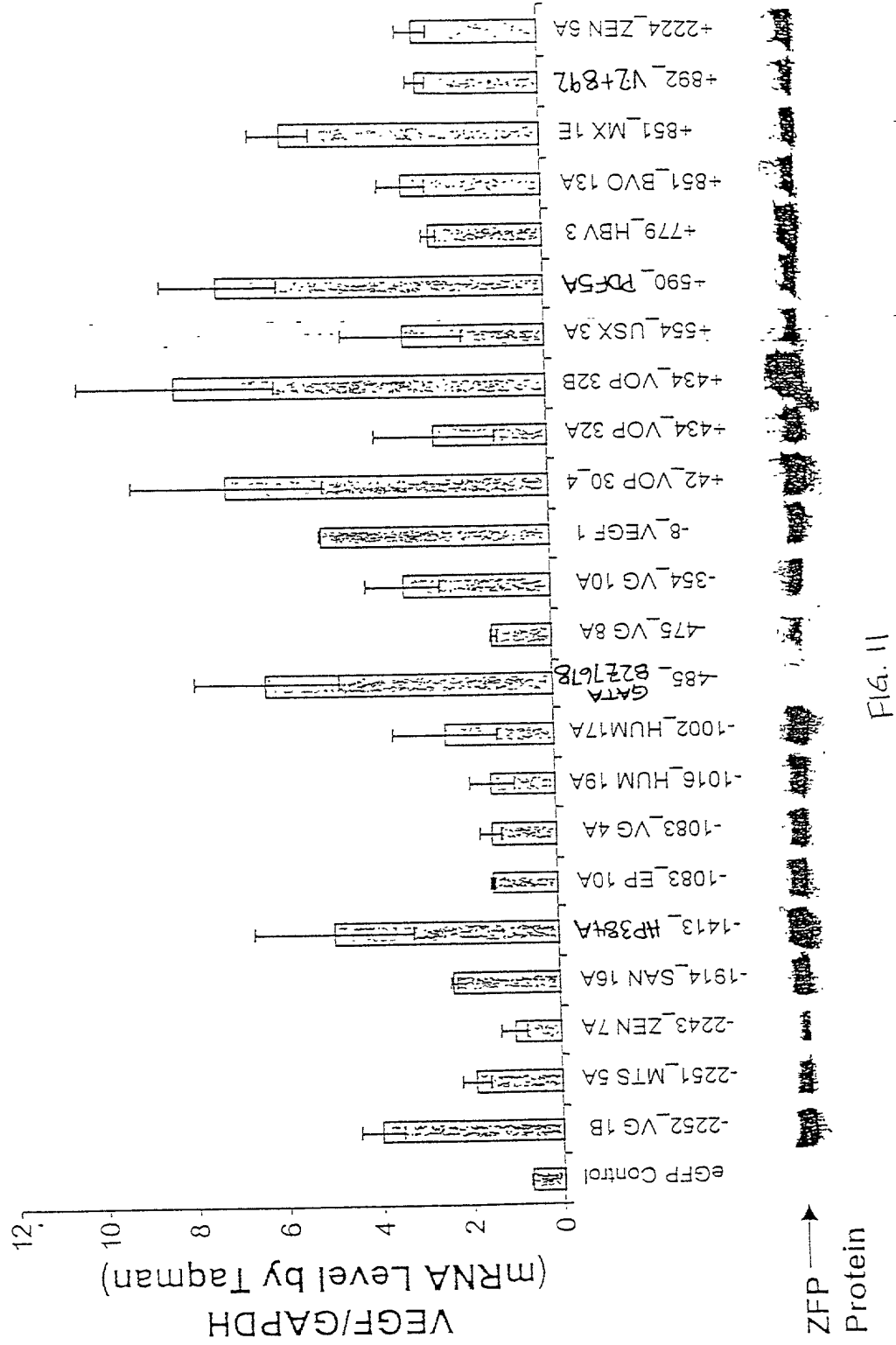


FIG. 1D

# Activation of Human VEGF-A Gene by ZFPs (VEGF-A mRNA Detected by Taqman Analysis)



# Activation of Human VEGF-A Gene Promoter by ZFPs (Activation of VEGF Reporter in 293 cells)

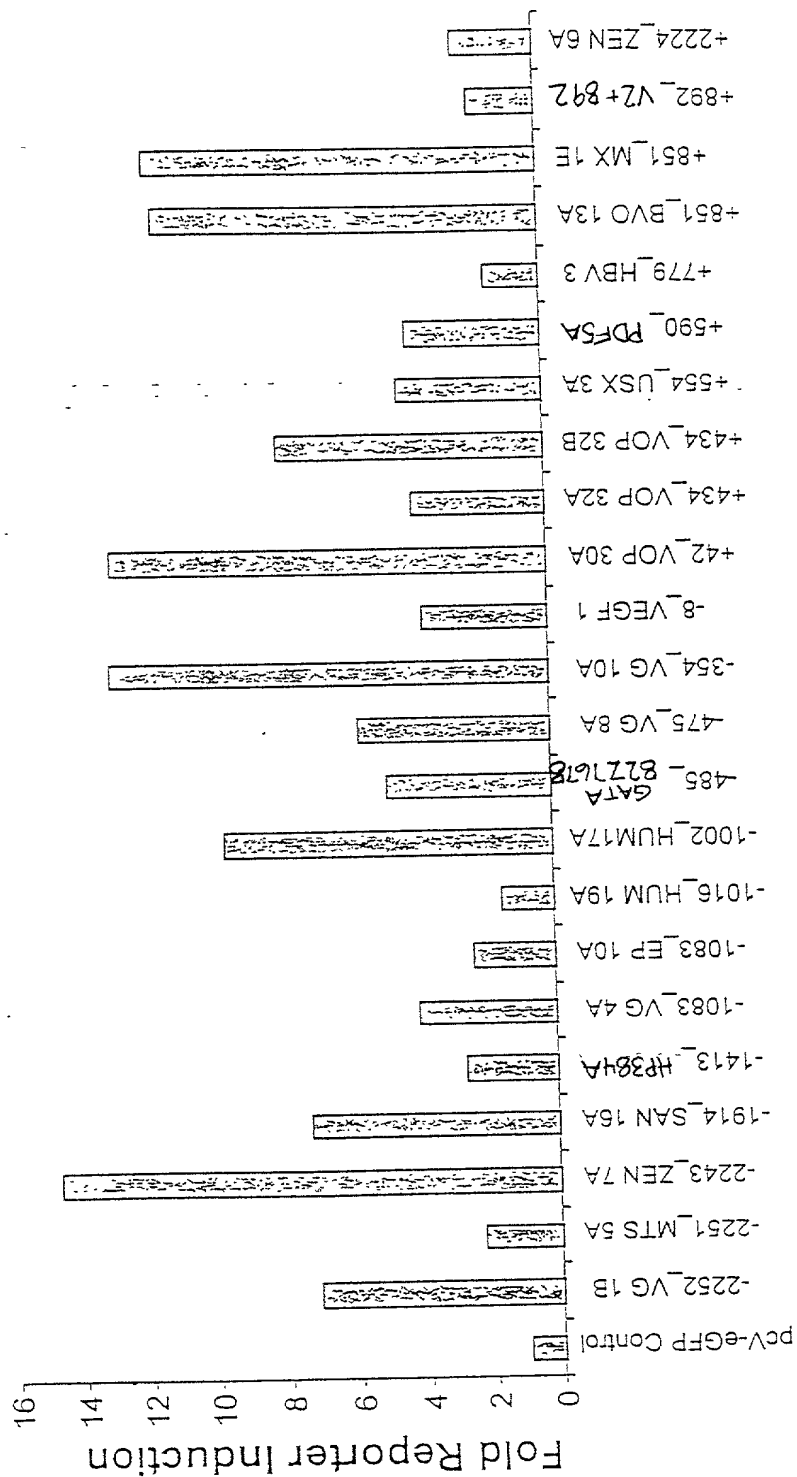


FIG. 12



# VEGF Activation By ZFP VOP28A and RAT24A in 293 Cells (VEGF protein detected by ELISA)

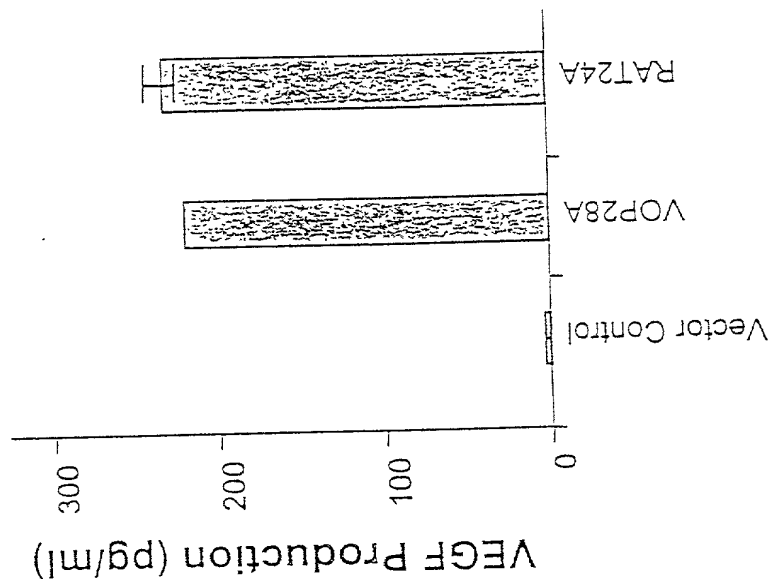
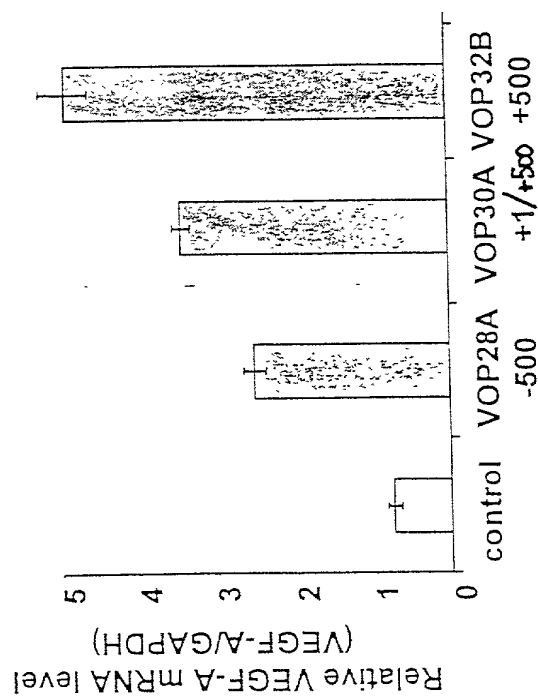


FIG. 13

# Figure 14

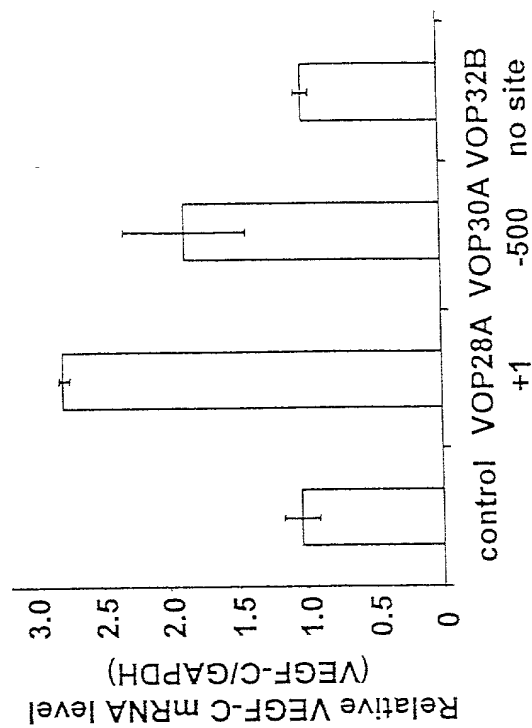
A

VEGF-A mRNA Activation by ZFPs

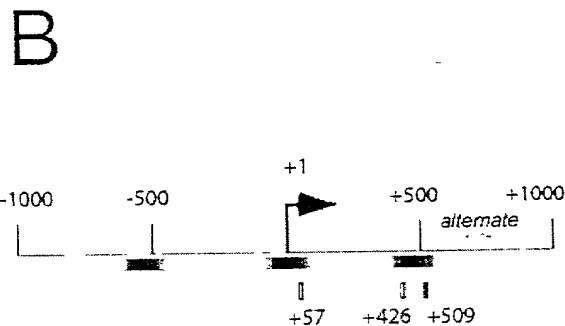
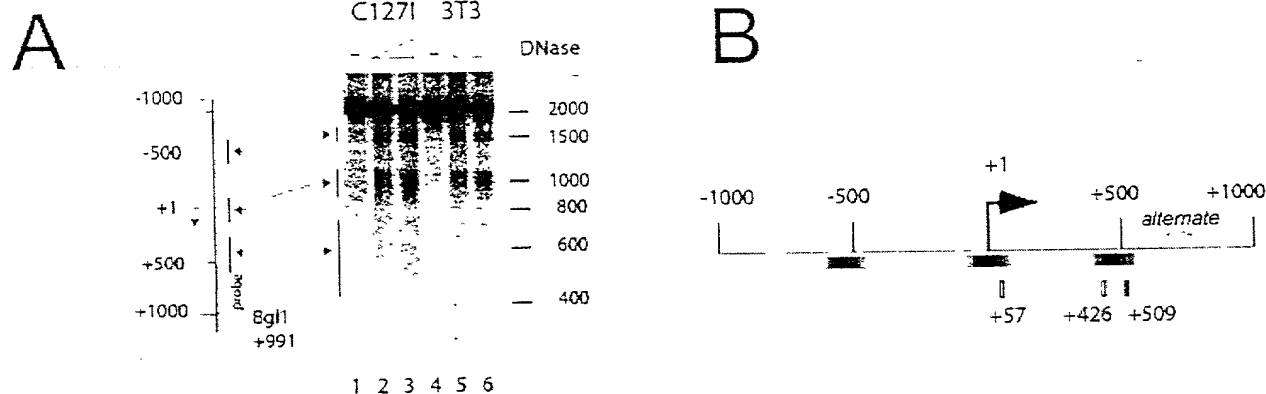


B

VEGF-C mRNA Activation by ZFPs



# Figure 15



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**C**

ZFP Name	Target		Finger Designs					
	Sequence 5' - 3'	Subsites 5' - 3'	-1 1 2 3 4 5 6					
mVZ+57	TGAGCGGCGGCAGCGGAGc	TGAg GCGc GCGc GCAc GCGc GAGc	QSGHLTK	F6				
			RDELNR	F5				
			RDELTR	F4				
			QSGSLTR	F3				
			RDELQR	F2				
			RDELNR	F1				
mVZ+426	GGGGGTGACc	GGGc GGTc GACc	RSDHLNR	F3				
			TSGHLNR	F2				
			DRSNLNR	F1				
mVZ+509	GCTGGGGGCg	GCTg GGGg GGCg	QSSDLNR	F3				
			RSDHLNR	F2				
			DRSHLNR	F1				

**D**

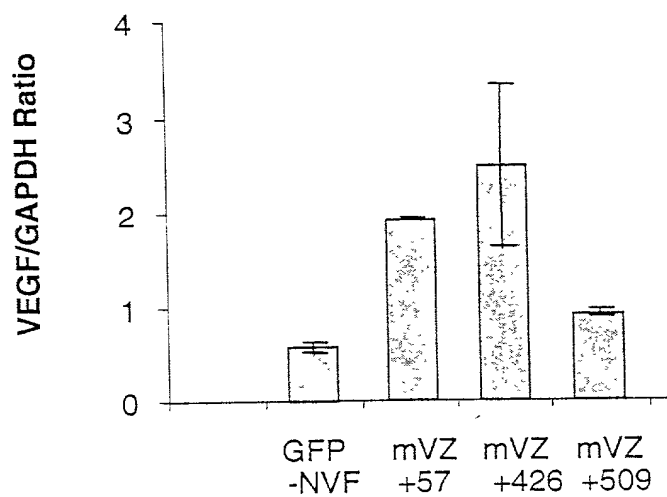
ZFP	Target	Gel Shift		Apparent Kd (nM)
mVZ+57	TGAGCGGCGGCAGCGGAGc		Bound Free	0.031
mVZ+426	GGGGGTGACc		Bound Free	<0.01
mVZ+509	GCTGGGGGCg		Bound Free	<0.01
SP1	GGGGCGGGGg		Bound Free	0.053

Figure 16

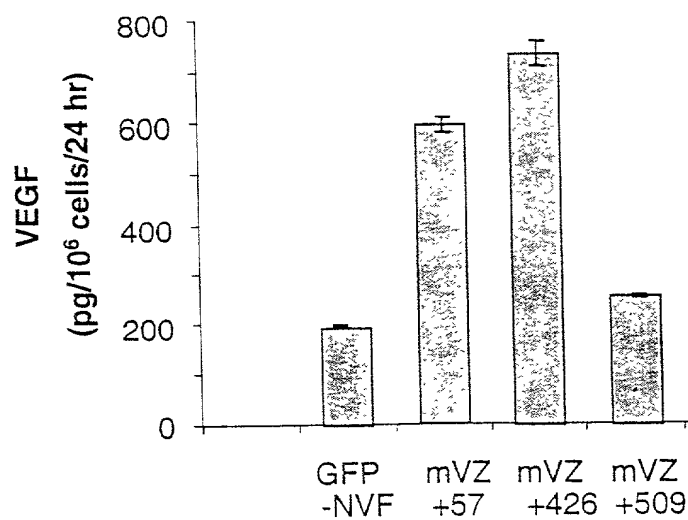
**A**

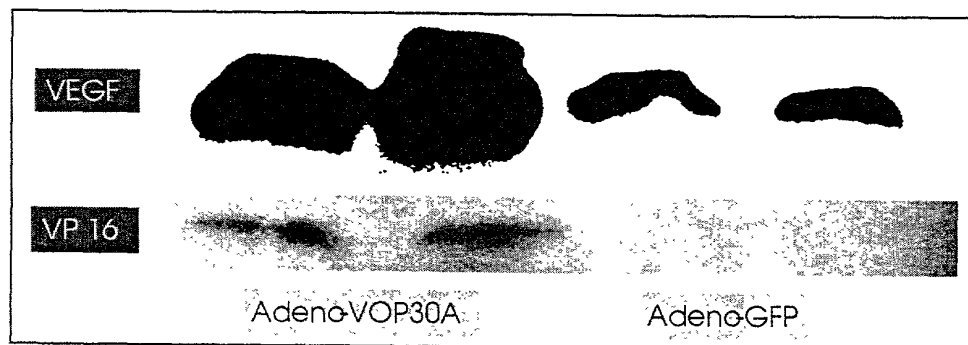
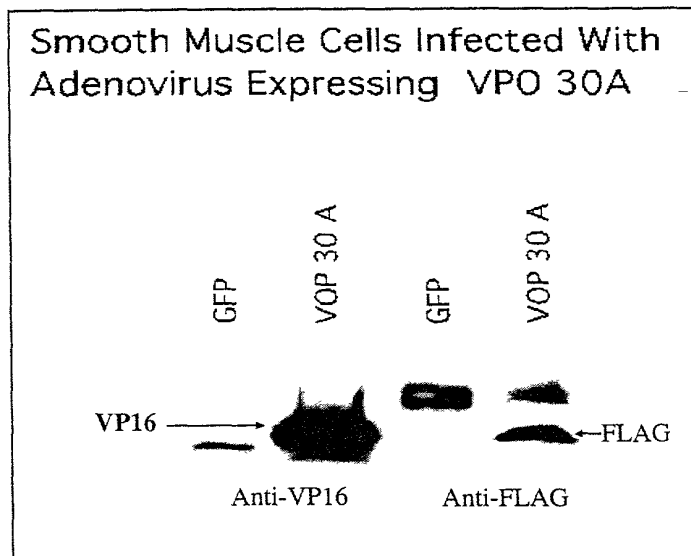
NLS	ZFP	VP16	FLAG
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**B**



**C**





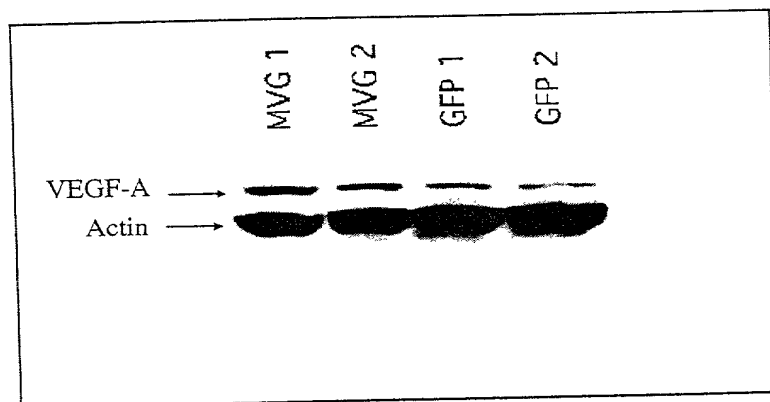


FIG. 17C

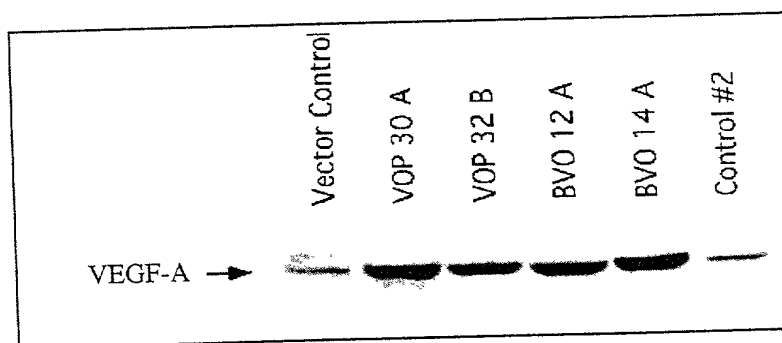


FIG. 17D

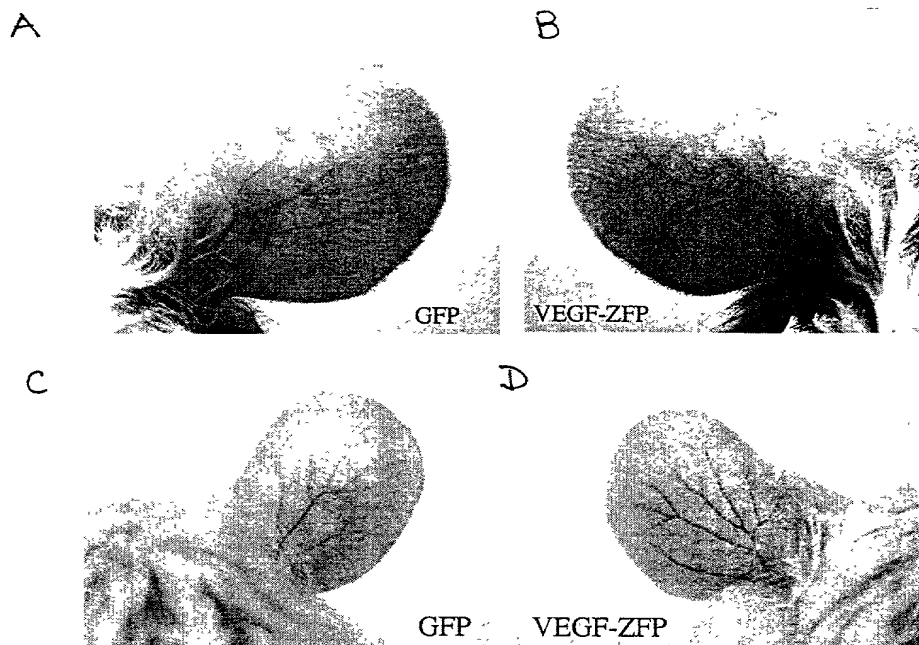


FIG. 18

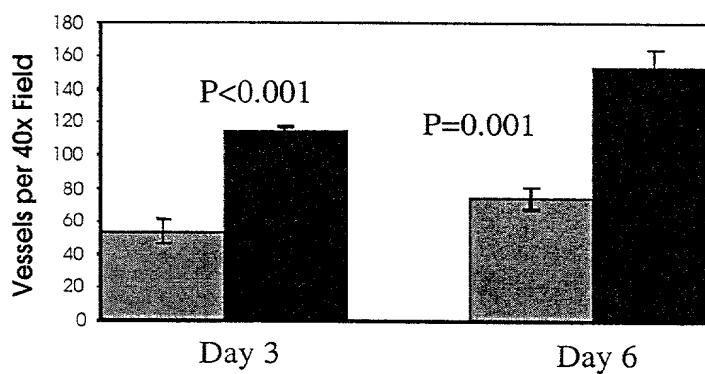


FIG. 18 E

FIG. 19A

GFP

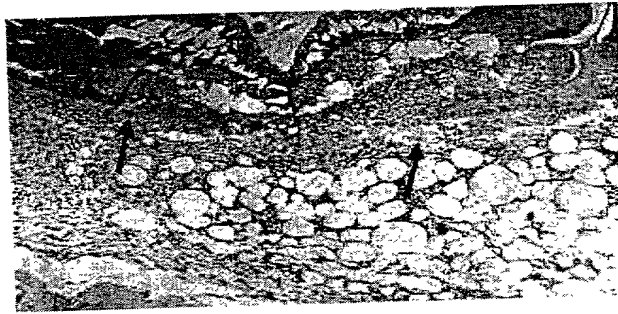


FIG. 19B

MVG

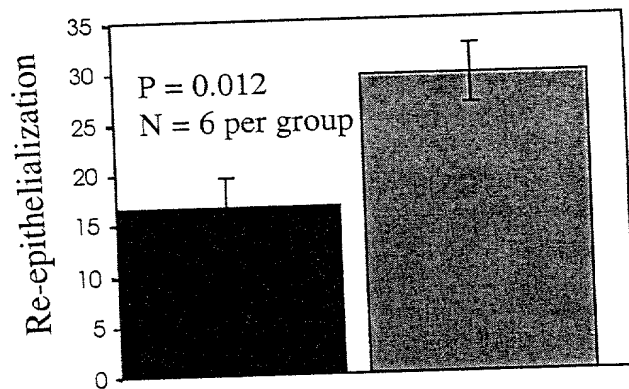
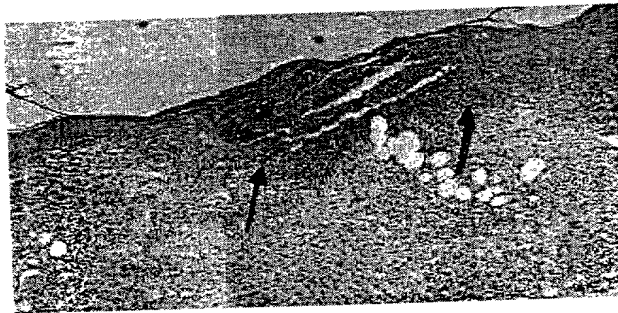
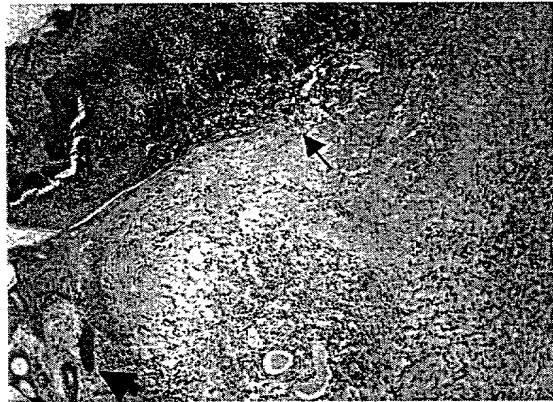


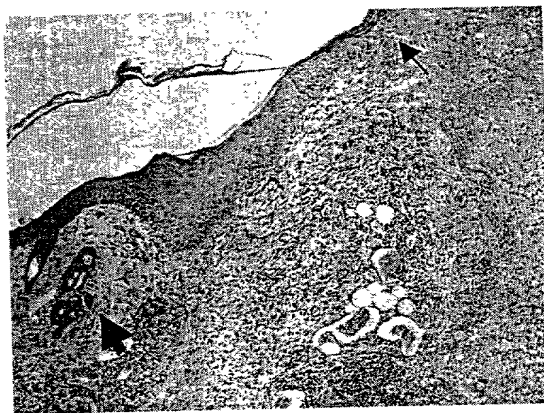
FIG. 19C





VEGF-ZFP (MVG)  
(MVG)

FIG. 20A



GFP Control

FIG. 20B

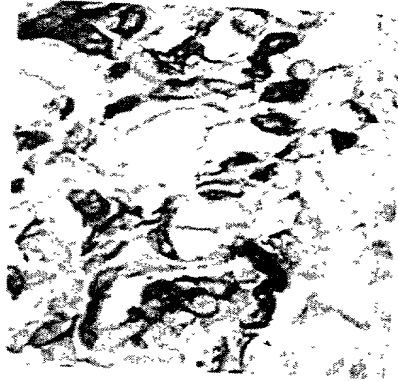


FIG. 21 A

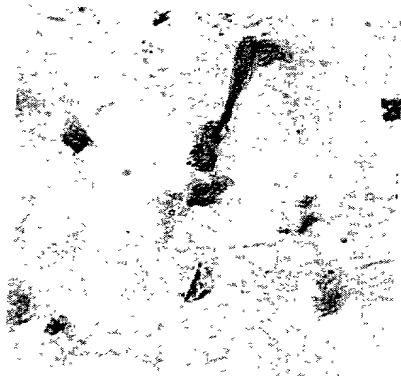


FIG. 21 B

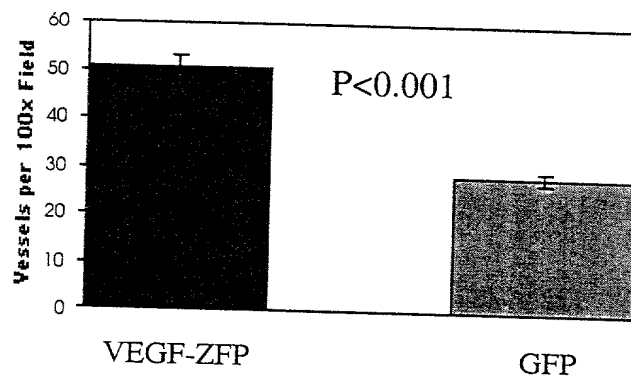


FIG. 21 C